Dr. Divya C.Senan

Fulbright –Nehru Visiting Scholar National Space Science Technology Centre University of Alabama in Huntsville, USA **Tel: (M):+12564797448 e-mail:** mail2divyacsenan@gmail.com

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Assistant Professor, Department of Education USIEF-Fulbright Campus Representative Assistant Director, Centre for Global Academics University of Kerala **Tel: (O):** +9714712304718 (**R):** +914702601528 (**M):** +919447552870 **e-mail:** mail2divyacsenan@gmail.com divyacsenan@keralauniversity.ac.in rush2girish@yahoo.co.in

AWARDS/SPECIAL RECOGNITION/HONORS

- 1. Precourt Fellowship by Stanford University, USA, 2018.
- 2. Invited session chair for conference at Cambridge University, UK, 2017.
- 3. Fulbright- Nehru Post-Doctoral Fellowship, 2017
- 4. UGC Raman Post-Doctoral Research Fellowship for Indian Scholars in USA, 2014.
- 5. Session's Best Paper Award, 20th World-Conference on Systemics, Cybernetics, and Informatics, Orlando, Florida, USA, July 5-8, 2016
- 6. Fulbright Campus Representative, University of Kerala.
- 7. Silver medalist, Masters in Education, Mahatma Gandhi University, Kerala, India (2004)
- 8. Gold Medalist, Masters in Physics, Mahatma Gandhi University, Kerala, India (2000)
- 9. College Topper, Bachelor of Education, University of Kerala (2001)
- 10. Recommended 2nd Rank for Research Award 2014 by University Grants Commission.

Exam Passed	Board/ University	Subjects	Year	Division/G rade Merit etc.	Percentage
Fulbright-Nehru Post-Doctoral Fellowship	National Space Science Technology Centre, University of Alabama in Huntsville, Alabama, USA	Education Policy & Planning	2017-18		
UGC-Raman Post- Doctoral Fellowship for Indian Scholars in USA	DoctoralDepartment ofFellowship for dian Scholars inAtmospheric Science, University of Alabama in Huntsville USA		2014 -15		
Doctor of Philosophy (PhD)	University of Kerala	Education	2012		
National Eligibility Test (NET)	University Grants Commission	Education	2003	-	-

ACADEMIC BACKGROUND

Master of Education (M.Ed.)	Mahatma Gandhi University	Education	2004	IInd Rank, I st Class	71.4%
State Eligibility Test (SET)	Directorate of Higher Secondary Education	Physics	2002	-	-
Bachelor of Education (B.Ed.)	University of Kerala	Physical Science	2002	I st class, College I st	71.2%
Master of Science (M.Sc.)			2000	Ist Rank, I st Class	69.4 %
Bachelor of Science (B.Sc.)	University of Kerala	Physics	1998	I st class	77.7%

RESEARCH PERFORMANCE AND PUBLICATION

I. International Post –Doctoral Research

Sl. No	Fellowship	Sponsoring	Host Institute	Duration	Year of	Title of the Project
1	Fulbright- Nehru Post- Doctoral Fellowship	Agency United States India Education Foundation (USIEF)	National Space Science Technology Centre, University of Alabama in Huntsville,	12 months	study 2017-18	Development of a Curriculum Design Approach Using Mobile applications and Geo Spatial Technology to
2	Raman Post- Doctoral Fellowship for Indian Scholars in USA	University Grants Commission under Obama- Singh 21st Century Knowledge Initiative (OSI)	Alabama, USA Department of Atmospheric Science, University of Alabama in Huntsville, USA	6 months	2014-15	Promote Energy Literacy Crowdsourcing Applications as Tools for Research and Experiential Learning in Environmental Science

II. Research Projects

Sl.		Major/	Sponsoring		Amount	
No	Title of the Project	Minor	Agency	Year	sanctioned	Status

1	Popularization of Renewable Energy Resources through Effective Energy Education Programmes to Improve Energy Literacy among Secondary School Students of Kerala	Minor	UGC-SWRO Banglore	2013-14	Rs.1,15,000	Declined to accept Raman Post- Doctoral Fellowship
2	Awareness for Confronting Social challenges of Cyber violence and Cyber-crimes in coastal areas of Kerala.	Major	UGC, New Delhi	2011-13	Rs.6,63,000 (Major Project)	Submitted
3	Design and Try-out of a Multimedia learning package on 'Health awareness of Occupational diseases' for the women at risk employed in coir retting along the coastal belt of Kerala	Minor	UGC-SWRO Banglore	2010-11	Rs.70,000 (Minor Project)	Submitted
4	Development of a 'Microprocessor based Sun tracking system'	Minor	Agency for Non- Conventional Energy and Rural Technology (ANERT), Trivandrum	2000	Rs.25,000 (Minor Project)	Submitted

III. Research Publications

BOOKS

- 1. Senan, Divya (2014)Occupational Diseases and Health Awareness through Multimedia: A Case Study among Women at Risk Employed in Coir Retting in Kerala, India, Partridge Publishing, A Penguin Random House Company. (ISBN: 978-1-4828-1629-7)
- 2. Senan, Divya (2013) Piaget's Cognitive Development Model: A Study of its Effectiveness on achievement, Lap Lambert Academic Publishing, Germany. (ISBN: 978-3-659-34615-6)
- 3. Senan, Divya &Vilasini, Asha (2012) Science Pedagogy through Constructivist Multimedia Learning Material: Design of a Strategy, Lap Lambert Academic Publishing, Germany. (ISBN: 978-3-659-25376-8)
- Senan, Divya. et al. (Eds.) (2013). Proceedings of the UGC sponsored National Seminar on Knowledge Management and Instructional Technology-The Praxis of Teaching & Learning: SreeNarayana Training College, Nedunganda.

CHAPTERS:

- Senan, Divya (2017) Initiatives of the Government of India for reducing child mortality. In S.V.Sudheer, Millennium Development Goals: Insights and Praxis (Ist Edition, pp.92-100). Trivandrum, India: UGC-HRDC, University of Kerala. (ISBN:978-81-908006-8-6)
- 2. Senan, Divya (2017) Crowdsoursing Mobile Apps & Geospatial Technology as Tools for Experiential Learning among Middle School Students Of Alabama, USA. In S.V.Sudheer, Spectrum of Educational

Initiatives (Ist Edition,pp.78-85).Trivandrum, India: UGC-HRDC, University of Kerala.(ISBN:978-81-908006-5-5)

- Senan, Divya & Nair, Udaysankar(2016) Crowdsourcing based Mobile Application to Enhance Student's Environmental Education and Research Experiences. In T.Manichander, *Emerging Trends in* Digital Era through Educational Technology (1st Edition, pp. 7-10), Raleigh, NC, United States: Lulu Publication. (ISBN: 978-1-365-18260-0)
- Senan, Divya (2013) Assuring the Quality of Multimedia Learning Packages: A New Approach. In Ganesh PunlikraoKhandare, T.Manichander&M.Brindhamani, *Quality Implementation and Improvisation in Teacher Education* (1st Edition, pp.194-197), Maharashtra, India: Laxmi Book Publication. (ISBN: 978-81-925596-5-0)
- Senan, Divya (2013) Empowering the Coir retting Women along the coastal belt of Kerala using a Multimedia Package on Health Awareness. In Jayanta Mete & AjitMondal, *Emerging Issues on Women Empowerment* (1st Edition, pp.344-350). Delhi, India: Kunal Books.(ISBN: 978-93-82420-20-0)

JOURNALS /PROCEEDINGS

- Senan, Divya & Nair, Udaysankar (2016). Examining Students' Perception of Using Crowdsourcing based Mobile Apps for Environmental Education and Research Experiences. *Proceedings of the 24th international Conference on Computers in Education. India: Asia-Pacific Society for Computers in Education*, December 2016.
- Senan, Divya; Edwards, Matthew; Khan, Salam &Vilasini, Asha (2016) Effectiveness of a Constructivist Multimedia-Learning Package on Shaping and Guiding Students' Attitudes Toward Physics, *The Journal of Systemic, Cybernetics and Informatics (JSCI), Vol.14, No.3*, 31-37, ISSN: 1690-4524.
- 3. Senan, Divya (2016) Using Multimedia Instructional Design to enhance intrinsic motivation: A practical approach, *Gurujyothi Research and Reflections, Vol.10, Issue1*, 64-67, ISSN: 0976-0865.
- Senan, Divya &Dinakar, Pramod (2015) Energy literate Citizenry for the 21st century: A focus Group study in the Indian context, *GCTE Journal for Research and Extension in Education, Vol 10 (1)*, ISSN: 0975-5144.
- 5. Senan, Divya (2015). Why we need Energy Literacy? *Gurujyothi Research and Reflections, Vol.8, No.2*, 64-67, ISSN: 0976-0865.
- Senan, Divya(2014) Constructivist Multimedia Learning Material: A Powerful Framework for Improving Science Pedagogy, Gurujyothi Research and Reflections, Vol.8, No.1, January 2014, 65-71, ISSN: 0976-0865.
- Senan, Divya (2013)Infusing BSCS 5E Instructional Model with Multimedia : A Promising Approach to Develop 21st Century Skills, *i-manager's Journal on School Educational Technology, Vol.9, Issue 2*, September – November 2013, 1 - 7, ISSN (Online): 2230 – 7133, ISSN (Print): 0973 – 2217.
- Senan, Divya (2013) Enhancing Educational Effectiveness in Physics through Cognitive Development Model: An Investigation in Formal Operational Stage, *The International Journal of Engineering and Science, Vol.2, Issue 8*, August 2013, 36 - 41, ISSN (Online): 2319 – 1813, ISSN (Print): 2319 – 1805.
- Senan, Divya (2013) Impact of Health Literacy Multimedia Package (HLMP) in Improving Awareness on Job-Related Diseases: A Case Study in Kerala, India, *IOSR Journal of Research and Method in Education*, *Vol.2, Issue 5*, July - August 2013, 48-54, ISSN (Online): 2320 – 7388, ISSN (Print): 2320 – 737X.

- Senan, Divya (2013) Impact of 'OPTO QUEST' on Learner Motivation in a Constructivist Learning Environment, *International Journal of Humanities and Social Science Invention, Vol.2, Issue 7*, July 2013, 21-28, ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714.
- Senan, Divya (2013) An Innovative Approach for Developing Constructivist Multimedia Learning Projects: Practical, Scientific and Pedagogical Contribution, *Journal of Knowledge, Vol.1, No.1*, August 2013, 110-122, ISSN: 2321-791X.
- Senan, Divya (2010)'Attitude of Student –Teachers towards Moodle' in Proceedings of International Conference on e-Resources in Higher Education Issues, Development, Opportunities and Challenges, February 2010, 137-139, ISBN: 978-81-908078-9-0.
- 13. Senan, Divya (2010) MOODLE: An Open Source Learning Management System, *Gurujyothi Research and Reflections, Vol.4, No. 1*, January 2010, 73-76.
- 14. Senan, Divya (2009) A study on Techno stress among Student–Teachers, *Gurujyothi Research and Reflections, Vol.3, No.2*, June 2009, 48-51.
- 15. Senan, Divya (2008) Multimedia Developer A New Role for Teacher, *Magazine- SreeNarayana Training College*, Nedunganda, 2008~09, 80-81.
- 16. Senan, Divya (2008) Website Evaluation Rubric in *Proceedings of National Seminar on Best Practices in IT-Enabled Teacher Education and Knowledge Management*, November 2008, 138-140.

ASSESSMENT OF DOMAIN OF KNOWLEDGE AND TEACHING SKILLS

I. Innovations/Contributions in Teaching:

- 1. **PEERA** : Public Environmental Education and Research App (Crowdsourcing mobile App based on Open Data Kit)
- 2. Optoquest: A Multimedia learning package in Physics based on the SCERT Std.IX syllabus
- 3. **Health Literacy Package**: A Multimedia package on "Health Awareness of Occupational Diseases "for the Women at risk employed in Coir retting along the coastal belt of Kerala.
- 4. Cyber AwarenessPackage: A Multimedia package on Cyber Awareness.
- 5. Thirakalkkipuram : A documentary about fishermen community (<u>http://youtu.be/n1EbWqUcocU</u>)
- 6. Physics Attitude Scale (PAS)
- 7. Cyber Crime Inventory
- 8. Occupational Disease Awareness Inventory
- 9. Questionnaire on Health Awareness of occupational diseases related to coir industry
- 10. Awareness scale on occupational diseases related to coir retting
- 11. Research tool for Cognitive Development Model.
- 12. Experiential Learning through Community Visit: An innovative strategy in Teacher Education.

II. Seminar Presentation

 Senan, Divya \$ Nair, Udaysankar. ""Developing and Implementinga Crowdsourcing based Mobile App for Experience-based learning in EnvironmentalScience" London International Conference on Education (LICE-2017) held at the University of Cambridge, UK, from the 11th to 14th of December 2017

- Senan, Divya. "Experiential Learning Approach for Training Pre-Service Teachers in Environmental Science Using Mobile Apps" AGU Fall Meeting organized by American Geophysical Union at San Francisco, California. December. 2015.
- Senan, Divya. "Crowdsourcing Applications as Tools for Research and Experiential Learning in Environmental Sciences" Ninety-Second Annual Meeting of the Alabama Academy of Science, Inc. Alabama Academy of Science and Alabama Junior Academy of Science at Lyon Hall, The University of West Alabama, Livingston, AL 35470, USA .March. 2015.
- 4. Senan, Divya "Design of a Multimedia Package on Health Awareness of Occupational Diseases for the Women at Risk Employed in Coir Retting Along the Coastal Belt of Kerala" UGC sponsored National Seminar on 'Information and Communication Technology in Education: Challenges and Innovations 'Karmela Rani Training College, Kollam at Karmela Rani Training College, Kollam. August. 2012.
- 5. Senan, Divya **"Role of Teacher Educators in Maintaining Cyber Ethics"** *UGC sponsored National Seminar on 'Classroom Management: Emerging Trends* 'SreeNarayana Training College, Nedunganda at SreeNarayana Training College, Nedunganda .June. 2011.
- 6. Senan, Divya "Assuring the Quality of Multimedia Learning Packages: A new Approach" in the UGC sponsored National Seminar on 'Learning to Be: Problems and Prospects towards Developmental Education'SreeNarayana Training College, Nedunganda at Sree Narayana Training College, Nedunganda. March. 2011.
- Senan, Divya. "Adapting BSCS 5E Model for the 21st Century Skills by Infusing it with Technology" International Conference on 'Towards a Global Competitive Learning Community- Role of Active Pedagogy', Department of Education, University of Kerala at Mascot Hotel, Thiruvananthapuram.February. 2011.
- 8. Senan, Divya "Perspective of Teachers at Secondary Level on the Pedagogical Effectiveness of 'Moodle'" in the *National Conference on 'Improving Teachers Competency Through E- Learning Solutions* 'Jenney's College of Education, Ramjee Nagar, Tiruchirappalli at Jenney's College of Education, Ramjee Nagar, Tiruchirappalli .January. 2010.
- 9. Senan, Divya. **"Designing Student-Centered, Technology Based Instruction to Enhance Intrinsic Motivation among Secondary School Students"***International Conference on 'Innovations in Pedagogical Approaches to Secondary and Technical, Vocational Education and Training (TVET)*, Toc H Institute of Science&Technology,NITTTR, Chennai & Indian Academy of Applied Psychology (IAAP) at Toc H Institute of Science& Technology, Arakunnam. October.2010.
- 10. Senan, Divya. **"Explore Moodle's Potential in Teacher Education"** *International Conference on Adaptability and Responsiveness in Teacher Education* 'Govt. College of Teacher Education, Thycaud, Thiruvananthapuram at GCTE, Thiruvananthapuram June.2010.
- Senan, Divya. "ICT Enabled Learning: Curricular Modes in Teacher Education, Kerala, India scenario" International Conference 'Global Learn Asia Pacific 2010—Global Conference on Learning and Technology' Association for the Advancement of Computing in Education (AACE) at Penang, Malaysia. May. 2010.
- 12. Senan, Divya "Attitude of Student Teachers towards Moodle" in the International Conference on 'e-Resources in Higher Education Issues, Development, Opportunities and Challenges' Department of Educational Technology&Dept of Library Informational Science,Bharathidasan University, Tiruchirappalli at SRM Hotel (3Star) Race course Road, Tiruchirappalli .February. 2010.
- Senan, Divya "Development of an Interactive Multimedia Learning Package" in the International Conference on 'Development Education: 21st Century Paradigms for Teachers' Department of Education, University of Kerala at the Institution of Engineers Hall, Thiruvananthapuram. October. 2009.

- 14. Senan, Divya **"A study on Techno stress among Student Teachers"** in the UGC sponsored National SeminaSenan, Divya r on 'Capability Buildingin Students: Concerns and Challenges of Teacher Education 'SreeNarayana Training College, Nedunganda at SreeNarayana Training College, Nedunganda. March. 2009.
- 15. Senan, Divya **"Website Evaluation Rubric"** in the *Kerala State IT-Mission sponsored National Seminar on Best Practices in IT Enabled Teacher Education and Knowledge Management* Centre for Educational Technology & National Curriculum Development Centre, Department of Education, University of Kerala at Department of Education, Thycaud, Thiruvananthapuram .October. 2008.
- 16. Senan, Divya. "Crowdsourcing Applications as Tools for Research and Experiential Learning in Environmental Sciences" Curriculum Fair 2016 organised by Curriculum Development Centre in collaboration with IQAc, University of Kerala, FLAIR, Department of Education at Department of Education, University of Kerala on March 1 2016.

III. Training /Orientation Programmes:

- 1. UGC-Sponsored Orientation Programme (IT-Oriented) conducted by the UGC-Academic Staff College, University of Kerala, Kariavattom from 17-Apr-2012 to 14-May-2012.
- 2. UGC-Sponsored Refresher Course on Human Rights conducted by the UGC-Academic Staff College, University of Kerala, Kariavattom from 28-May-2013 to 17-June-2013.
- 3. UGC-Sponsored Refresher Course in Education and Teaching Methods conducted by the UGC-AcademicStaff College, University of Kerala, Kariavattom from 09-March-2017 to 29-March-2017.

IV. Administrative Experience

- 1. Assistant Director, Centre for Global Academics, University of Kerala.
- 2. Member, Internal Quality Assurance Cell, University of Kerala.
- 3. USIEF-Fulbright Campus Representative, University of Kerala.
- 4. Member, NIRF committee, University of Kerala
- 5. Member, Examination Reform Committee, IQAC, University of Kerala.
- 6. Peer Review Committee Member, **The Journal of Systemics, Cybernetics and Informatics (JSCI)**, A peer reviewed open-access international publication in the areas of Systems Philosophy, System Sciences and Engineering (Systemics), Communication and Control concepts, systems and technologies (Cybernetics,) and Information Systems and Technologies (Informatics). ISSN: 1690-4524(Online).
- 7. Peer Review Committee Member, **Research Tracks**, A peer reviewed bi-annual international journal in Education. ISSN: 2347-4637.
- 8. Co-Editor, Research Demagogue, A peer reviewed bi-annual international journal in Education.
- 9. Editorial Board Member, Gurujyothi Research and Reflections; Interdisciplinary biannual Journal published by SreeNarayana Training College, Nedunganda.ISSN: 0976-0865
- Chief Editor, Knowledge Management and instructional Technology-The Praxis of Teaching and Learning: UGC sponsored National Workshop volume published by Sree Narayana Training College, Nedunganda. ISBN: 978-81-927948-0-8.

- 11. Educational Consultant, Mahatma Gandhi Memorial Model Higher Secondary School, Varkala, India.
- 12. Educational Consultant, Aditya Pre School, Ayiroor, India.
- 13. Member judge for Science Fair and Competition, **'Kerala School Shastrolsavam'** conducted by Directorate of Public Instruction, Govt. of Kerala.
- 14. Resource person of the eight day Hands on Training and National workshop on "Use of ICT in the classroom: Process of teaching, learning and assessment organized by Curriculum Development Centre, Department of Education, University of Kerala.
- 15. Resource person for the workshop on "**Best practices in Higher Education**" sponsored by Internal Quality Assurance Cell (IQAC), Govt. College of Teacher Education, Thycaud, Thiruvananthapuram, Kerala.
- Review panelist for the paper presentation session in the National Seminar on 'Technological Innovations in Science Pedagogy' held at Holy Trinity College of Education, Melpalai, Tamilnadu on 2nd February 2013.
- 17. Resource person in the National Workshop on "Models of Teaching" organized by Holy Trinity College of Education, Melpalai, Tamilnadu on 8th April 2013.
- 18. Resource person in the **Regional Workshop on "Models of Teaching"** organized by K.T.C.T.College of Teacher Education, Kaduvayil, Kallambalam, Thiruvananthapuram, Kerala.
- 19. Resource person for Training of Secondary School teachers on **'Development of multimedia learning material'** at Govt. College of Teacher Education, Thycaud Thiruvananthapuram, Kerala.
- 20. Resource person for Training of Secondary School science teachers on **"Effect of Multimedia learning in Physics**" at Govt. College of Teacher Education, Thycaud Thiruvananthapuram, Kerala.
- 21. Resource person at **'Hands on Training and Workshop on ICT 2016'** for Training of Researchers and Teachers of schools/colleges/university at Department of Education, Thycaud, Thiruvananthapuram, Kerala.

V. Organizing Secretary

- 1. Organized**International Pulse year Celebrations** sponsored by Kerala State Council for Science Technology and Environment, supported by Department of Science and Technology, Govt. of India, convened on February 18-19, 2014.
- 2. OrganizedWorld Environment day Celebrationsponsored by Kerala State Council for Science Technology and Environment, supported by Department of Science and Technology, Govt. of India, convened on February 18-19, 2014.
- 3. International Seminar on **"Public Understanding of Global Warming and Climate Change"** sponsored by Kerala State Council for Science Technology and Environment, supported by Department of Science and Technology, Govt. of India, convened on February 18, 2014.
- 4. Organized **Sci-Fest 2014** sponsored by Kerala State Council for Science Technology and Environment, supported by Department of Science and Technology, Govt. of India, convened on February 19, 2014.
- 5. Organised a Focus Group Interview on "Energy Literate Citizenry for the 21st Century" sponsored by ANERT, Trivandrum collaborated with Society for Energy Engineers & Managers.
- 6. OrganisedUGC sponsored National workshop on **"Knowledge Management and Instructional Technology-The Praxis of Teaching and Learning"** convened on August 23-24, 2013.

- 7. Organized Regional Workshop on "Revised B.Ed. Curriculum: Trends & Practices".
- 8. Organised Educational Exhibition on Science conducted in Sree Narayana Training College, Nedunganda.
- 9. Organised a Seminar on 'Energy conservation and Management' sponsored by Energy Management Centre, Trivandrum.

VI. Professional Travel (Outside India)

- Fulbright –Nehru Post Doctoral Fellow at National Space Science Technology Centre, Huntsville, USA (2018)
- 2. Session Chair for the London International Conference on Education (LICE- 2017) at University of Cambridge, UK.
- 3. Raman Post-Doctoral fellow in University of Alabama in Huntsville, Alabama, USA (2014).
- Ninety-Second Annual Meeting of the Alabama Academy of Science, Inc. Alabama Academy of Science and Alabama Junior Academy of Science at Lyon Hall, The University of West Alabama, Livingston, AL 35470, USA (2015).
- International Conference 'Global Learn Asia Pacific 2010—Global Conference on Learning and Technology' Association for the Advancement of Computing in Education (AACE) at Penang, Malaysia. (2010.)

VII. Professional Association/Membership

- 1. Member, American Geophysical Union (AGU), USA
- 2. Life member, Society of Energy Engineers & Managers (SEEM), India.
- 3. Member, Global Energy Parliament by Isa ViswaPrajnana Trust (Consultative status to UN-ECOSOC)
- 4. Life member, Council for Teacher Education. Kerala Chapter, India.
- 5. Member, Kerala University Physical Science Teachers Association, Kerala.
- 6. Member, Association of International Researchers of Indian Origin.

VIII. Teaching Experience

Sl.No.	Institution	tution Designation De		Years of Experience
1	Department of Education University of KeralaAssistant Professor18th February 2017- Till date			
2	SreeNarayana Training College, Nedunganda	th		9 years 10 months
3	Mahatma Gandhi University college of Teacher Education, Kanjirapally Educati		16 th Feb 2004 to 23 rd Feb 2007	3 years 7 days

DECLARATION

I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Thanking you

Yours sincerely,

Dr.Divya C.Senan